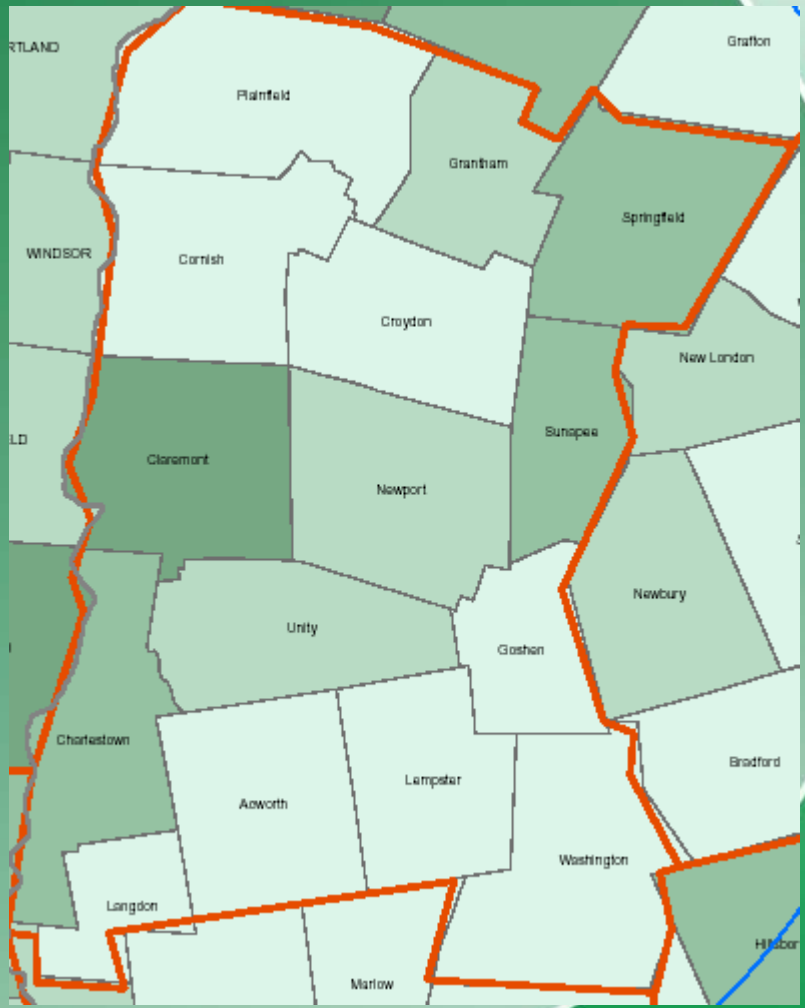
A RECYCLING FUTURE FOR SULLIVAN COUNTY

Resource Recycling Systems

Project Goal:

Evaluate the Business Case for a Sullivan County Material Recovery Facility "MRF"



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Benefits of a Local MRF

- Access to Recycling Markets
- Highest Market Revenue
- Foundation for Strong Programs
- Flexibility to Add Materials
- Cornerstone of “Recycling Campus”
- Jobs/Economic Development

Resource Recycling Systems

Key Factors in a Strong MRF Business Case

- Recyclables “tonnage”
- Competing MRFs “location”
- MRF Design “processing”
- End Markets “marketing”

Resource Recycling Systems

Developing In-County Tons

Collection Systems

Resource Recycling Systems

- Four Largest Towns
  - Curbside Recycling
  - Transfer Stations
  - Direct Haul to MRF Recycling Campus
- Rest of County
  - Transfer Stations
  - Direct Haul to MRF Recycling Campus

Developing In-County Tons

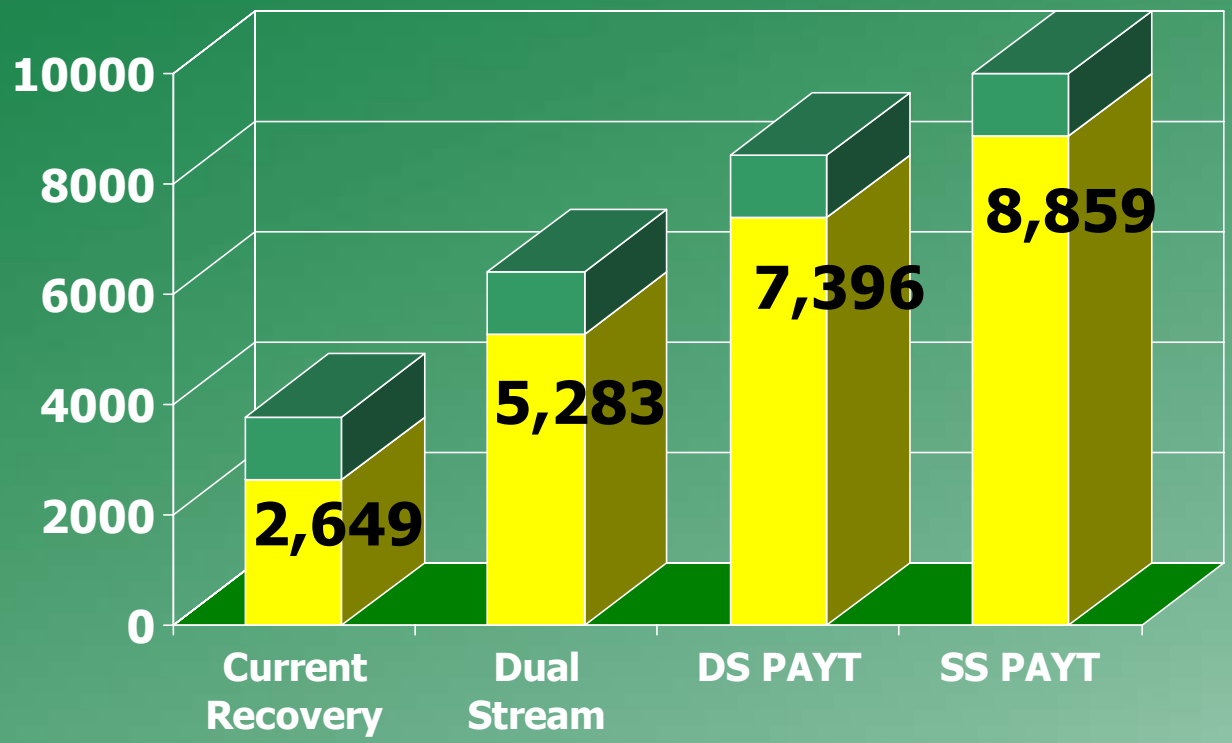
Commingling and Incentives

- Current
  - Source Separation at Transfer Stations
    - Traditional “MRF Recyclables”
    - Special and Bulky Recyclables
- Future
  - Source Separate Special/Bulky Recyclables
  - Commingle “MRF Recyclables”
    - Either Dual or Single Stream
    - With or Without Pay-as-You-Throw (PAYT)

Resource Recycling Systems

Developing In-County Tons

Total Potential MRF Tons/Year



- Current Recovery @ 263 lbs
- Dual Stream @ 525 lbs
- DS PAYT @ 735 lbs
- SS PAYT @ 881 lbs

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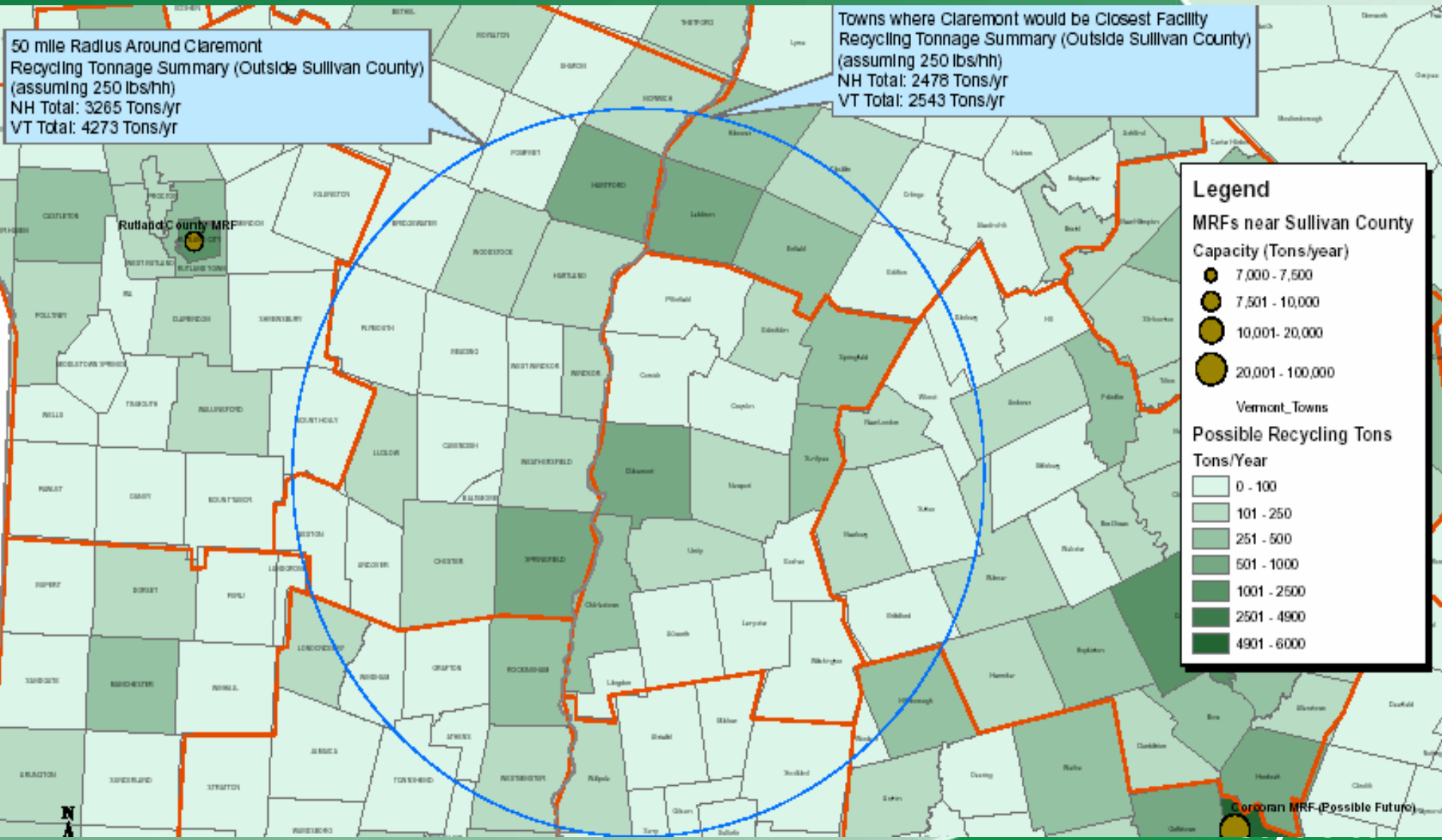
Securing Out-of-County Tons

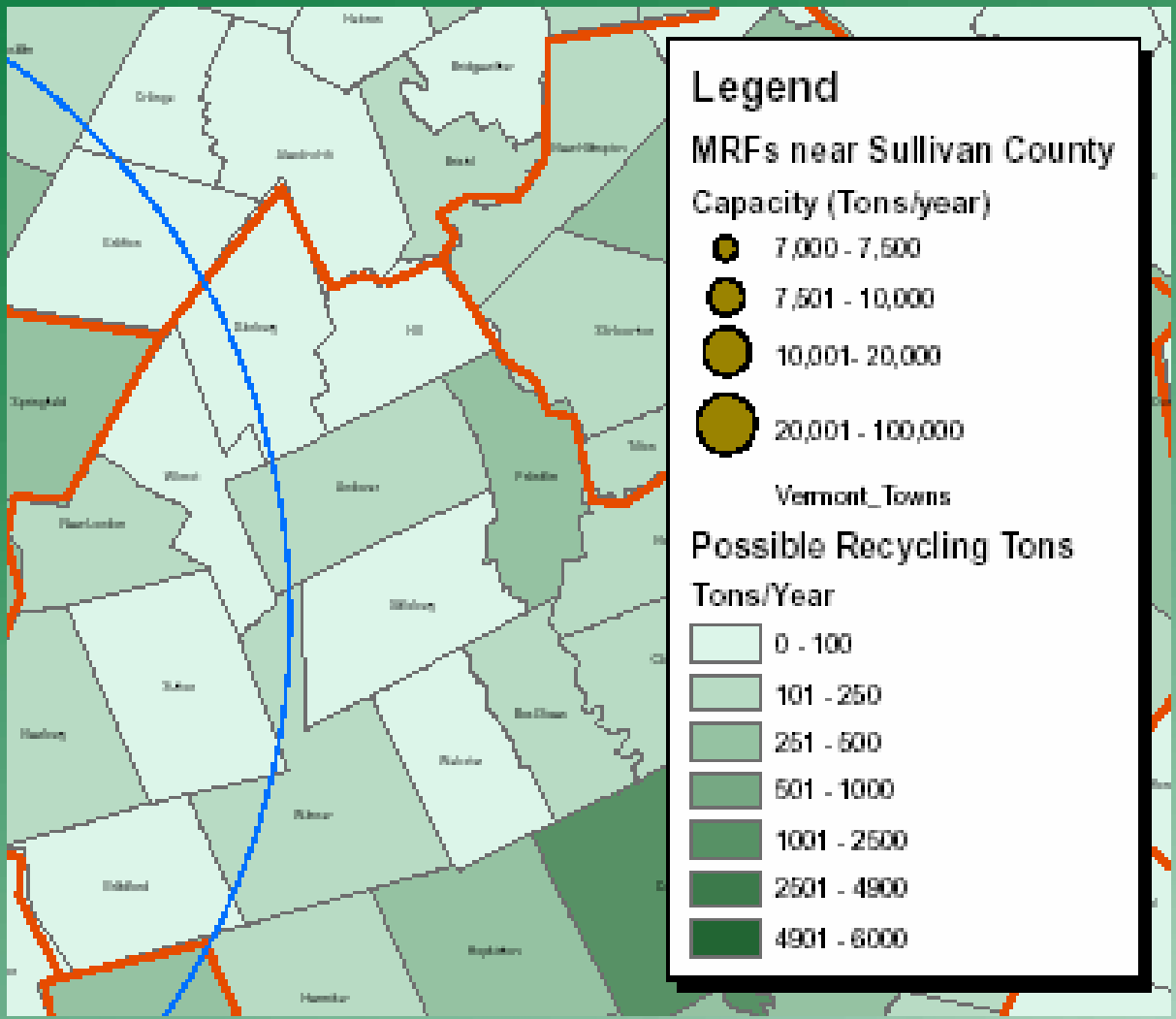
Available MRF Tons/Year

Resource Recycling Systems



Securing Out-of-County Tons

Available Tons by County



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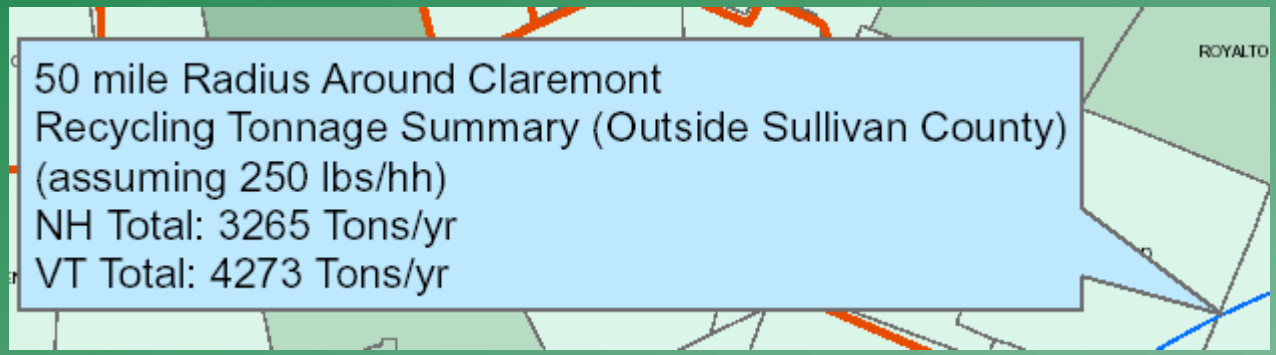
Securing Out-of-County Tons

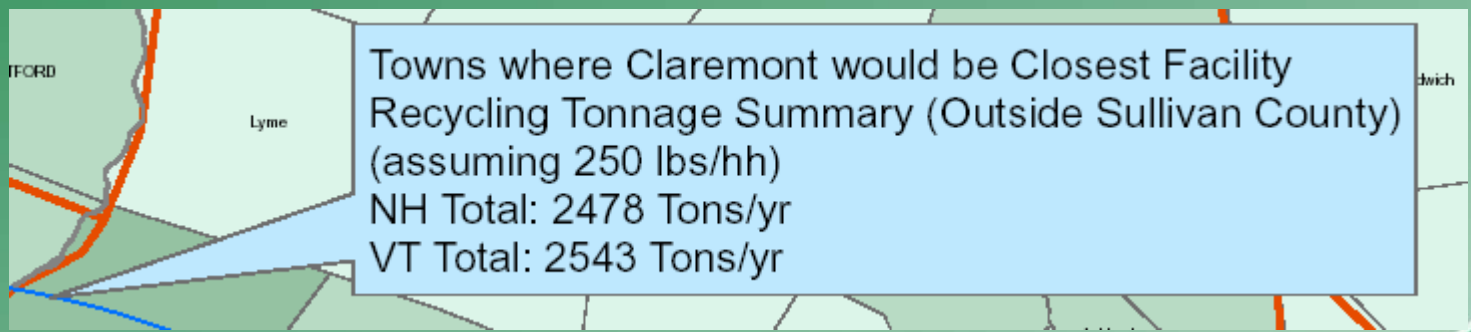
Available Versus Potential Tons

Resource Recycling Systems

- Available – Over 7,000 Tons



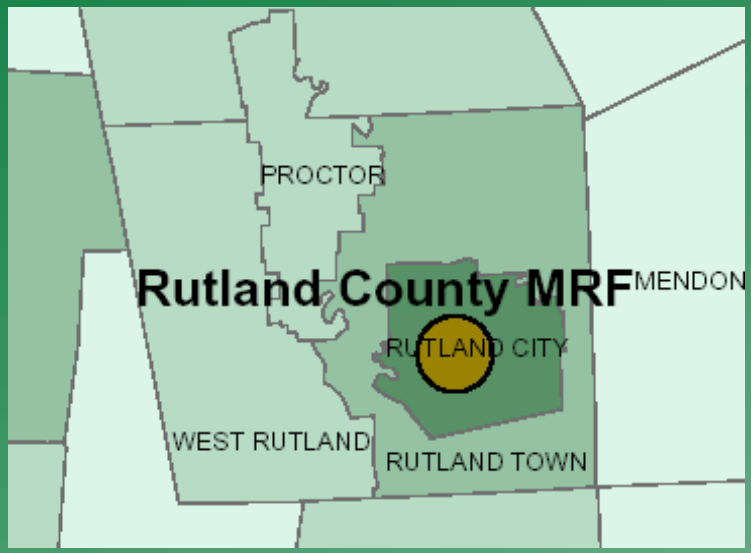
- Potential – 5,000 Tons

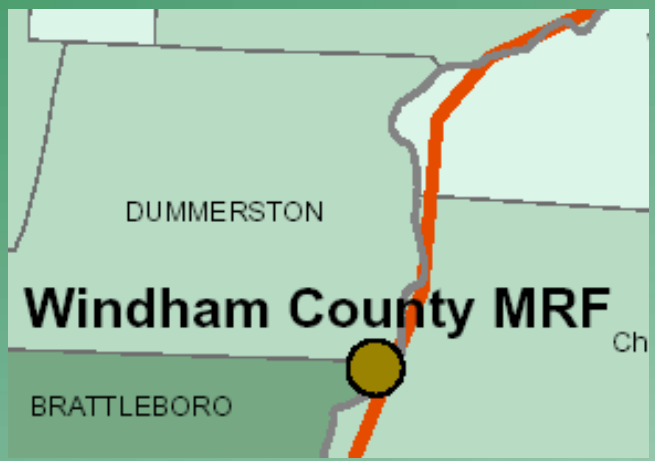


Securing Out-of-County Tons

Other MRF Options in Region

Resource Recycling Systems





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Securing Out-of-County Tons

Challenges of Competing Interests

Resource Recycling Systems

- Competing MRFs Offer Good Deals
  - Dual or Single Stream w/Revenue Share
- Current Recovery Levels
  - Have assumed 250 lbs/hh
- Larger Towns Get Revenue for Materials
  - e.g. Lebanon and Hartford have Small Balers
  - May get as Much as $25/ton
- May Need to Offer $ to Secure Tonnage
  - Location Works in Your Favor
- Still May not Work!

Developing MRF Capacity

Recycling Transfer to Other MRFs

Resource Recycling Systems

Name	Distance (mi)	Est Drive Time (hrs)	Est. Haul Cost (per Ton)	Single Stream Revenue Share (per Ton)	Fiber Revenue Share (per Ton)	Container Revenue Share (per Ton)
Chittenden Solid Waste District	110	2.5	$17.00	($5)	-	-
Rutland County	49	2	$16.00	-	$5 - $10	$5 - $10
Windham County	47	1.5	$15.00	-	($25)	($25)
City of Keene	40	1.5	$14.75	-	$25	$0
Corcoran (Possible Future)	70	2	$16.50	$2.40	-	-

- Distance (40 to 110 miles)
- Drive Time (1.5 to 2.5 hours)
- Haul Cost ($14.75 to $17.00/ton)
- Revenue Sharing Potential (up to $25/ton)
- Five Options to Consider
- Capacity and Availability Issues

Developing MRF Capacity

Bale and Ship Direct to Markets

Resource Recycling Systems

- Markets Strong
- Stability has Improved
- Asian/Overseas Pull
- New Materials Added
- Requirements Easing
- Global Forces Dominate
  - Pricing
  - Demand
- Local MRFs Now Use…
  - Local Markets
  - Worldwide Markets

Material	2nd quarter 2007 Sale Price (per Ton)
SWL (#40)	$ 237.50
SOP (#37)	$ 142.50
ONP (#8)	$ 95.00
ONP (#6)	$ 47.50
OCC	$ 85.50
Residental Mix/MP (#1)	$ 61.75
Tin/Steel	$ 120.00
Aluminum	$ 1,400.00
Glass-Clear	$ (10.00)
Glass-Green	$ (10.00)
Glass-Amber	$ (10.00)
PETE	$ 300.00
HDPE-Clear	$ 550.00
HDPE-Colored	$ 300.00
Residue	$ (90.00)

Developing MRF Capacity

Environmental Benefits

Resource Recycling Systems

Environmental Benefits of Doubling Recycling in Sullivan County		
Total Water Saved	16,148,375	Gallons
Total Energy Saved	12,315,030	kWh
Total GHG Emissions Saved	7,043	Metric Tons CO_2 Equivalent
Total Landfill Volume Saved	5,848	Cubic Yards
Total Trees Saved (from paper products)	37,518	Trees

- Recycling is a Very Effective "Climate Friendly" Act
- Potential Value in Emerging Carbon Trading Markets
- Doubling Recycling in Sullivan County would…
  - Save Energy Equivalent of 4,310 Houses for a Month
  - Save Greenhouse Gas Equivalent of 1,200 Cars for a Year
  - Save Water Usage Equivalent of 291 People for a Year

Developing MRF Capacity

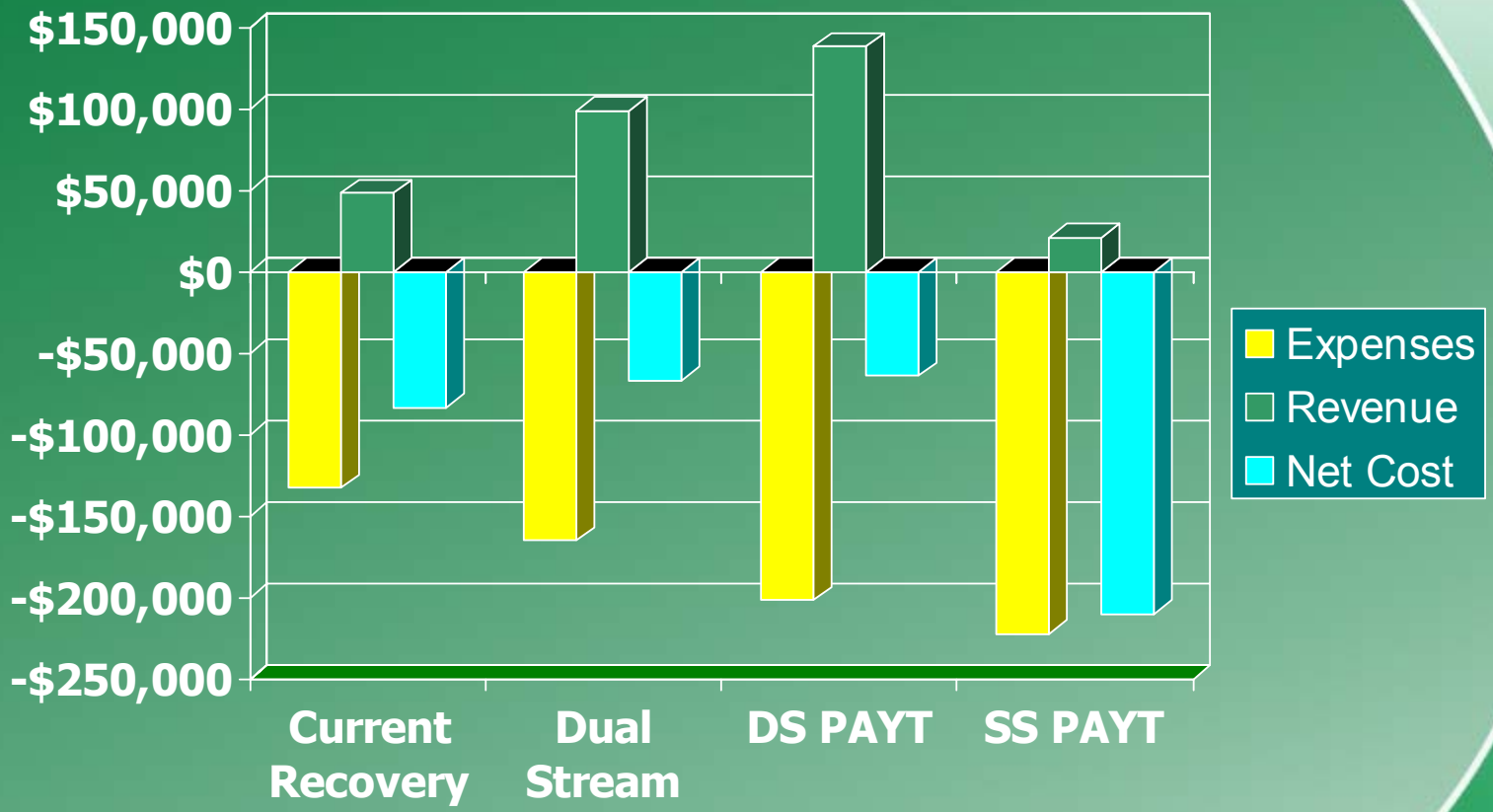
Recycling Campus Options

- Transfer Option
  - Consolidate recyclables
  - Transfer all materials to other MRF
- Hybrid Transfer/Process Option
  - Consolidate recyclables
  - Transfer some to other MRF
  - Sort, bale and direct market others
- Process Only Option – County Owned MRF
  - Consolidate recyclables
  - Sort, bale and direct market everything
  - Full Scale or Mini-MRF Designs

Resource Recycling Systems

Developing MRF Capacity

Transfer Options Net Cost per Year



- Includes 6,000 square foot recycling building, trucks and loader
- Net operating costs range from $8.61 to $31.37 per ton
- Would require $3.17 to $10 per household per year

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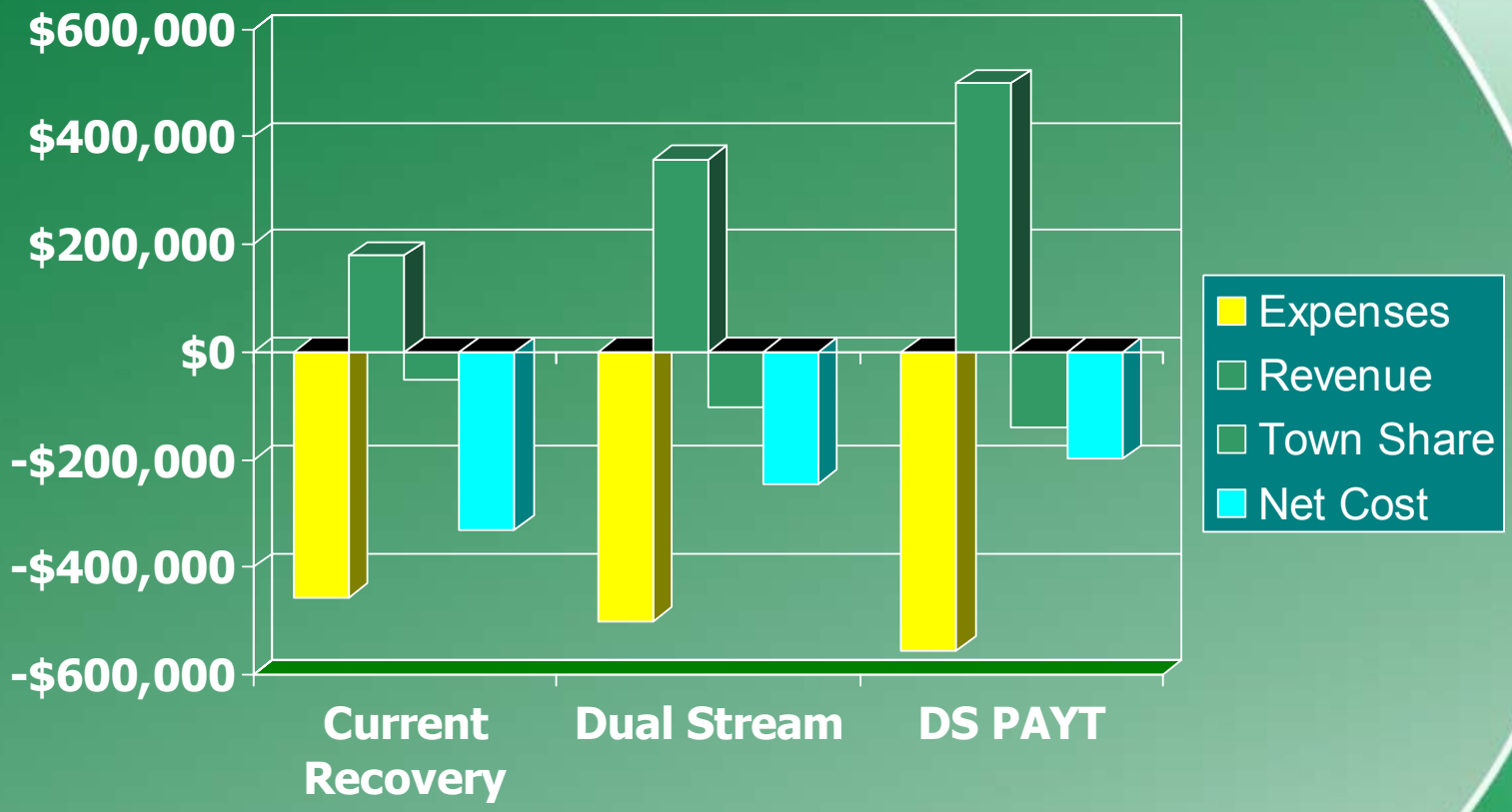
Developing MRF Capacity

Hybrid Process/Transfer Net Cost per Year



- Towns transfer stations share $25/ton revenue
- Net operating costs range from $26.88 to $124.18 per ton
- Would require $9.77 to $16.35 per household per year

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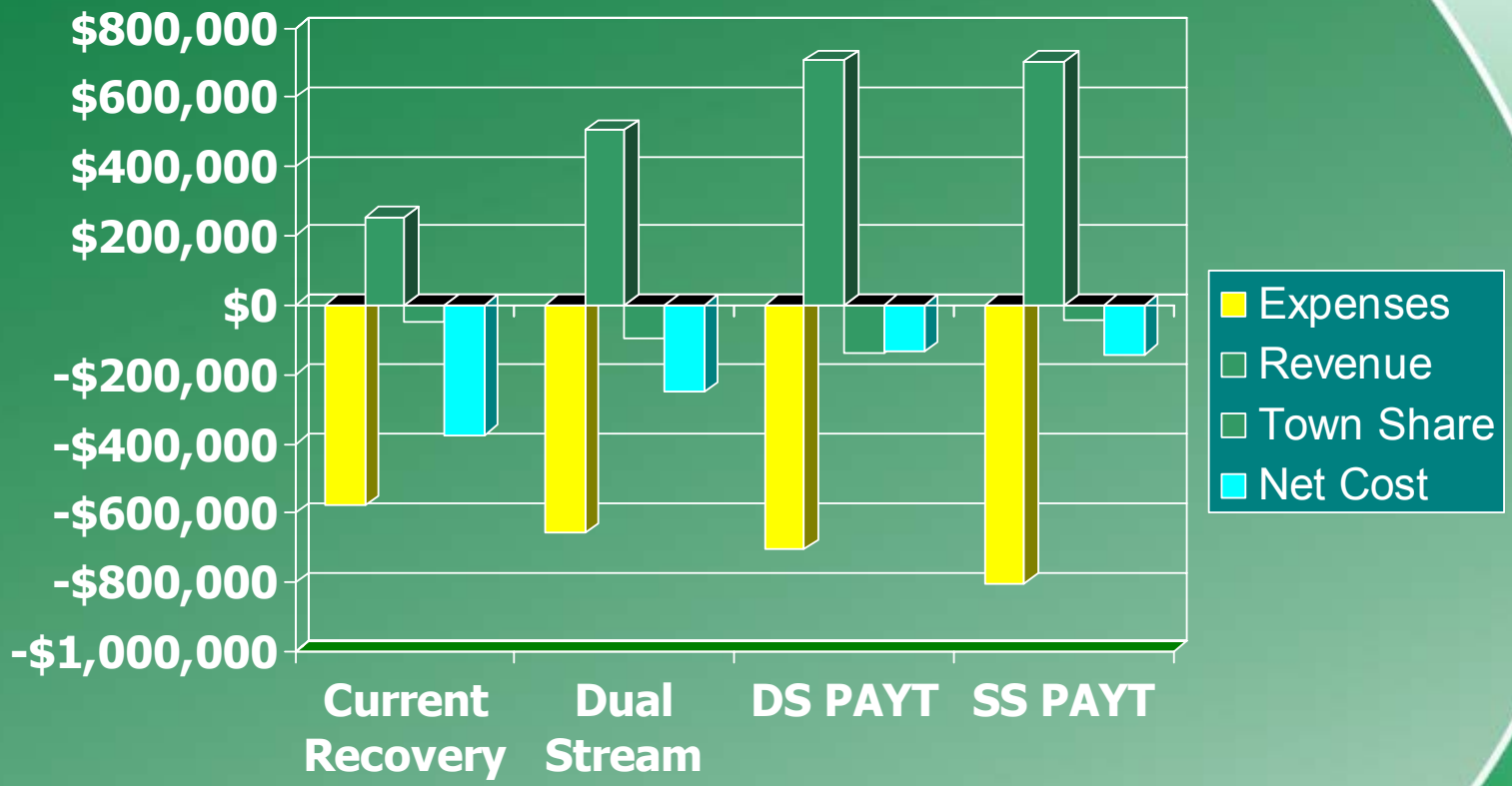
Developing MRF Capacity

Mini-MRF Net Cost per Year



- Towns transfer stations share $25/ton DS and $5/ton SS
- Net operating costs range from $16.16 to $141.36 per ton
- Would require $6.72 to $18.27 per household per year

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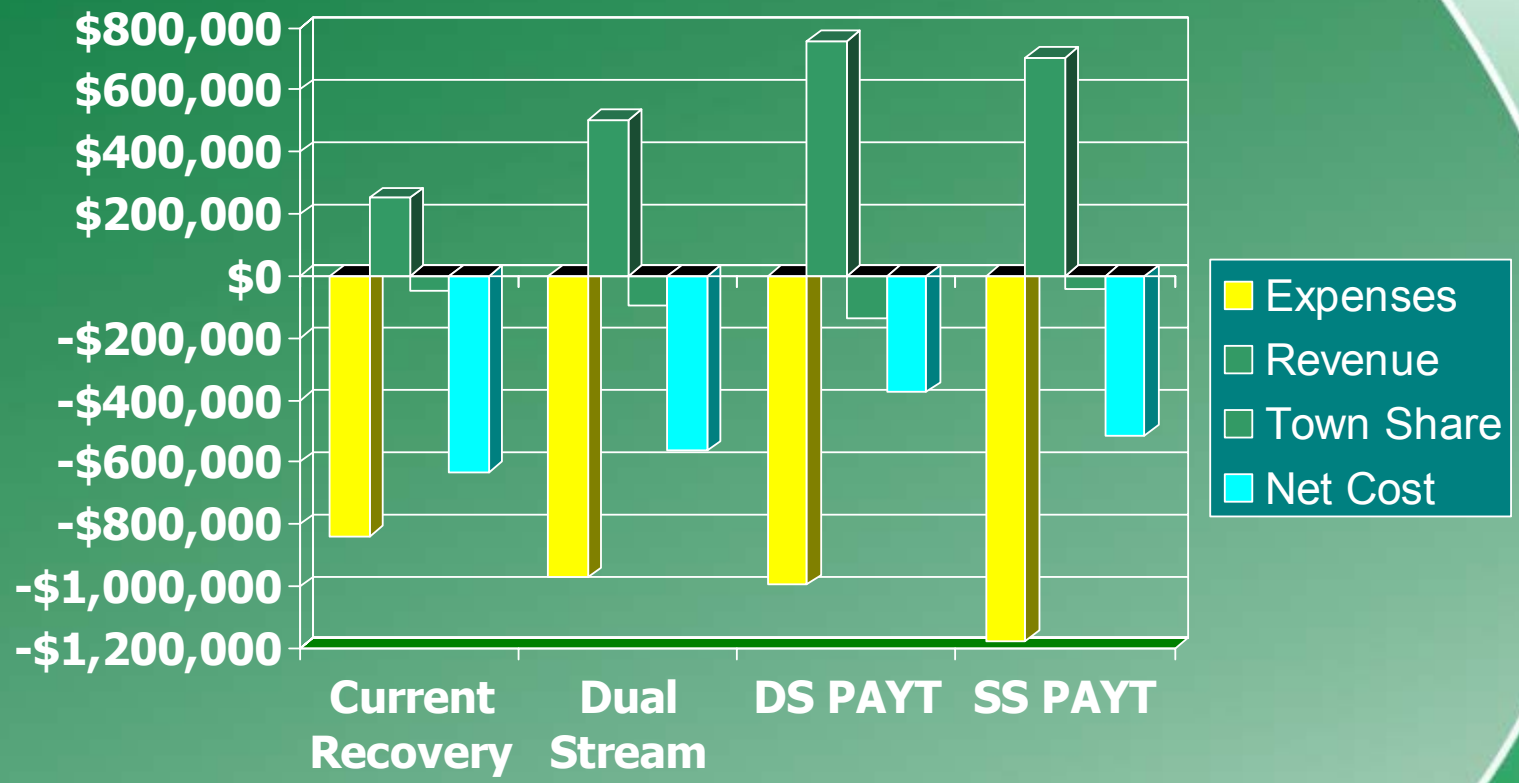
Developing MRF Capacity

Full Scale MRF Net Cost per Year



- Towns transfer stations share $25/ton DS and $5/ton SS
- Net operating costs range from $47.26 to $238.77 per ton
- Would require $18.62 to $31.45 per household per year

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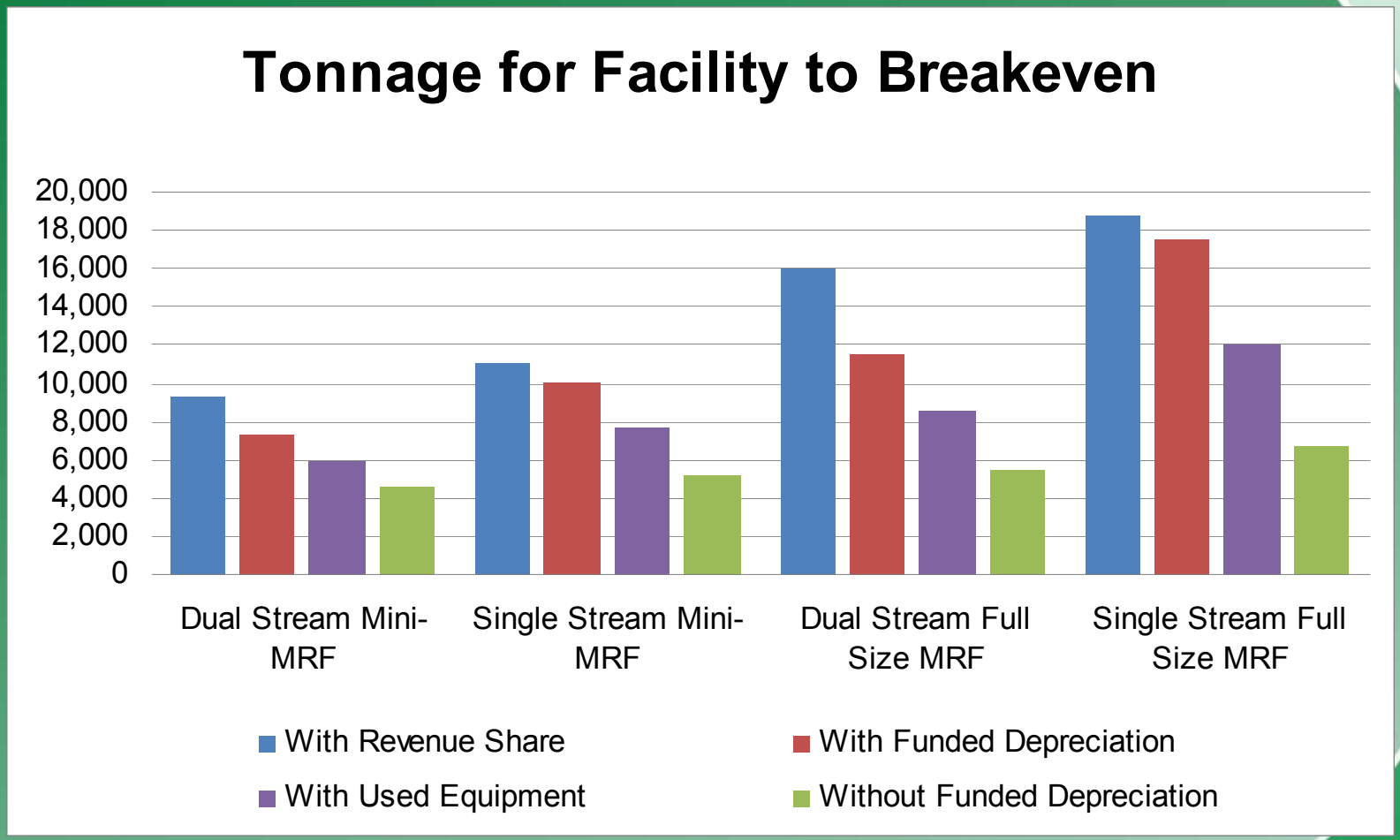
ITS ALL ABOUT THROUGHPUT!

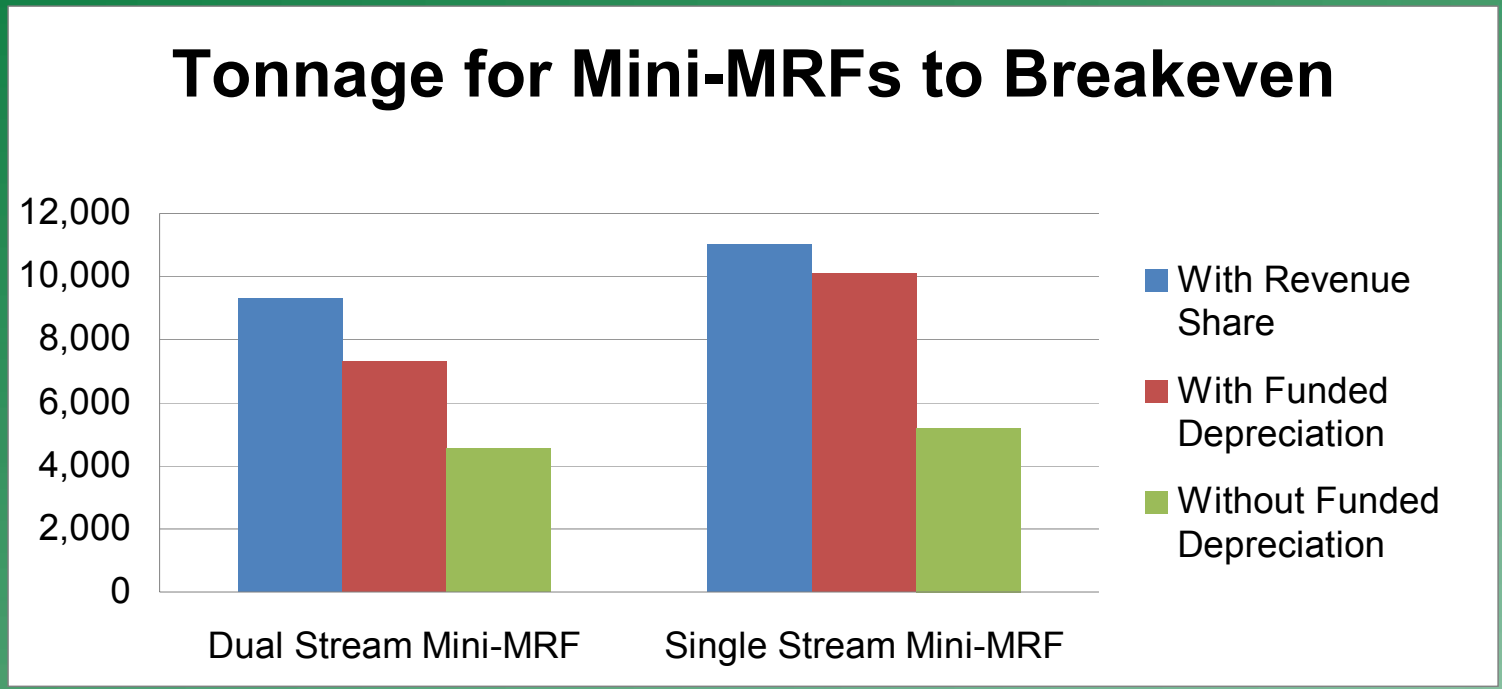
Break Even Tonnage Requirements

Resource Recycling Systems



What Makes Sense?

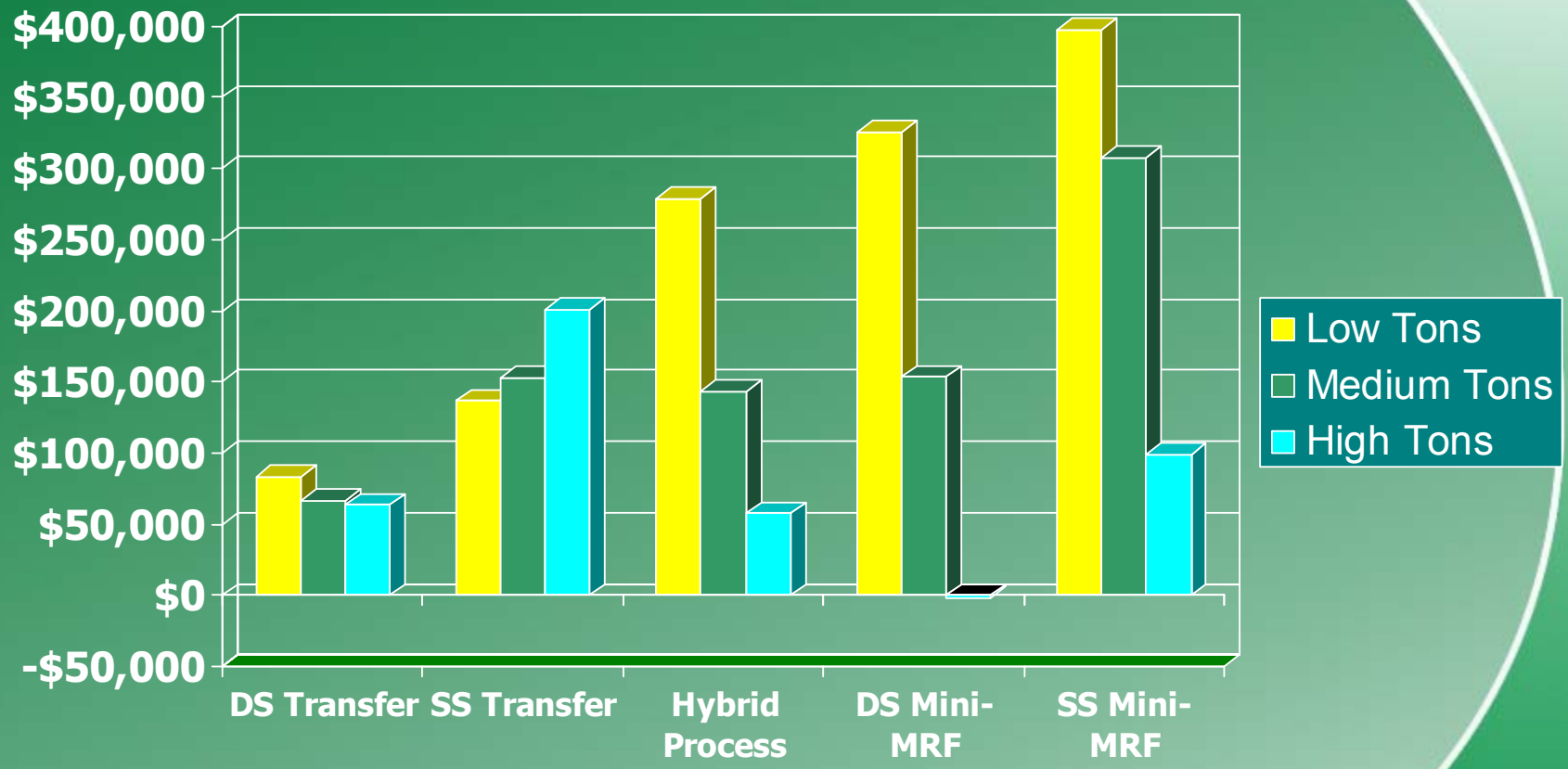
Securing Additional Tons above Breakeven



- Depends on definition of breakeven
- 9,000 to 11,000 tons per year with town revenue sharing
- Less than 6,000 tons per year before depreciation
- Tons can come from in-county or out-of-county

What Makes Sense?

Low/Medium/High Tonnage Net Cost



- Dual stream (DS) transfer has been cost profile but no profitability
- Hybrid transfer/process has great cost profile at medium/high tons
- Dual stream (DS) mini-mrf good at medium/high tons + profit potential

What Makes Sense?

Recommended Phasing Strategy – Phase I

- Organize, Consolidate and Transfer
  - Increase & Consolidate Recyclable Tonnage - PAYT
  - Organize as District or Non-Profit Operating Entity
  - Work for Municipality Participation and Ownership
  - Work with Municipalities in Adjacent Counties
  - Work Closely with Transfer Stations in County
  - Grow Additional Collection Capacity – Curbside in Towns
- Build/Operate Recycling Transfer Center
  - Site Selection (Claremont? Newport?)
  - Simple Construction (Existing Building or Coverall Type)
  - Secure Operating Partners (Transfer, MRF, Host Site)
  - Focus on Excellence in Operation
  - Strive for Low Net Cost and Low Cost/Ton

Resource Recycling Systems

What Makes Sense?

Recommended Phasing Strategy – Phase II

- Continue Consolidation
  - Increase & Consolidate Recyclable Tonnage
  - Work with Municipalities in Adjacent Counties
  - Continue Growing Additional Collection Capacity
- Expand Recycling Transfer Center
  - Decision to Stay Dual Stream or go Single?
  - If DS - Install Sort Line/Baler for Commingled Paper
  - Update Operating Partners (Cost/Service Control)
  - Add Specialty Materials – "Super Drop-off"
  - Add Other Services – e.g. Permanent HHW Site
  - Continued Focus on Low Net Cost and Low Cost/Ton
  - Added Focus on Increasing Revenues (Fees – Recyclables)

What Makes Sense?

Recommended Phasing Strategy – Phase III

- Continue Consolidation and Tonnage Growth
  - Increased use of Revenue Sharing to Participants
  - Increased Financial Health for Operation - PAYT
- Consider Expansion to DS or SS Mini-MRF
  - Investment in Long Term Structures
  - Tonnage Offers Potential for Profitable Operation
  - Partner MRF may Help Seed MRF Development
  - Specialty Materials Handling Grows
  - Site Improvements – Expand Super Drop-off
  - Facility Expansion
    - Compost? Other Organics?
    - Waste Transfer?

Resource Recycling Systems

Questions/Discussion

Resource Recycling Systems

Thank You!